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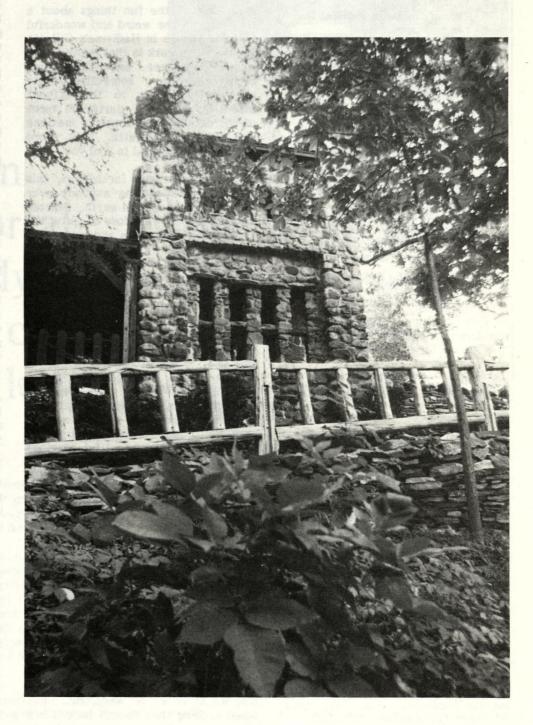
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The castle
"Sherlock
Holmes"
called home

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Cover Photo: Gillette's "Grand Central Station" Rosemary Gutbrod

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Gillette guides help visitors enjoy "Willy's" weird castle

By John Waters

One of the fun things about a trip through the weird and wonderful Gillette Castle in Hadlyme's Gillette Castle State Park is that many of the things you see and think you recognize are something else entirely. Thanks to the offbeat inventive genius of Hartford's turnof-the-century millionaire matinee idol, William Gillette, they were deliberately planned to fool you.

In design and furnishings, this castle is like nothing anybody ever saw anywhere else on earth. Started in 1913 when he was close to sixty, the castle took five years and more than a million dollars to build —with every architectural detail and every stick of furniture designed by Gillette himself, strictly for his own amusement.

If ever a tourist attraction needed smarter-than-average guides, this is it - and it has them. Every summer, Park Manager Don Grant recruits a corps of college undergraduates to supplement the full-time staff. After careful training, it is they who tip you off to the fact that the beautiful carvings of entwined branches on the face of a huge white oak door are not there just for looks. Their real purpose is to trigger secret locking mechanism.

Or if you wonder why there is a rather nondescript set of shelves with nothing on them in one of the upstairs bathrooms, question a nearby guide and she will reach for a hidden lever that transforms the shelves into a stepladder leading to a secret room high above the Connecticut River.

Downstairs, another pleasant guide will point out what looks like a king-sized chest or wardrobe. But when a thing that doesn't look like a key is inserted in a concealed slot in

the back of it, it becomes a handsome serving bar and capacious liquor cabinet. After all, it was the Prohibition era, so one did well to be careful.

The Castle's 1980 "Class" of college guides are all girls: Carol Wright of Old Saybrook (Duquesne); Schleis of East Haddam (Adelphi); Diana Duby of Middletown (Syracuse); Mary Molle of East Haddam (Fairleigh-Dickinson); and Lori Barber of East Haddam (UConn at Groton). A friendly, well-trained group with remarkable esprit de corps, several of them have come back year after year; and one who is graduating from college in 1981 said she is going to miss the castle next summer. They like the work, they like the place, and they like the boss and his wife. "It isn't just a job," one of them said. "We think of ourselves as sort of a family." They are possessive about the castle, defend it from unjust criticism, and are also possessive about William Gillette, who is "Willy" to them.

During July and August, there are more people piling into the castle than can be handled in conducted tours. Instead, the guides man certain duty stations about the building to collect tickets, answer questions, keep crowds flowing, calm rampaging kids, and keep an eye out for looting or vandalism. They change stations during the day to prevent monotony and balance the work load.

One of their stickier jobs is to disabuse visitors of the stubbornly held notion that William Hooker Gillette's considerable wealth came from razor blades rather than from playwriting, producing, and acting. This link-up bugged Gillette most of his life; but he humorously admitted that one good way for an actor to become well known was to have the same name as a popular razor.

Almost equally persistent, the girls say, is the 100-percent-mistaken belief that Gillette had had on ancient castle dismantled stone by stone in France, Germany, or what have you, and shipped to Hadlyme for reassembly. The facts are that the tremendous amount of stone in the and other buildings was castle quarried locally. (Incidentally, Gillette never called this one-of-akind creation of his a castle. He used the name he gave it: "The Seventh

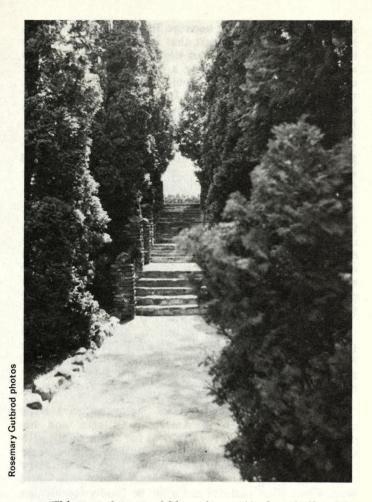
Stage version of the immortal Sherlock only one of creations of William Gillette

By John Waters

Imagine how a little girl celebrating her sixth birthday in 1927 would giggle when her grandmother read her this greeting from a nice old septuagenarian who had been one of the most famous actors in America:

I am having a terrible time celebrating your birthday. I got up at 6, went down the stairs 6 at a time, kissed the cat 6 times, ate 6 eggs, and drank 6 cups of coffee. When you get to be 70, it will surely kill me. Seventy stairs will break my neck. The cat will scratch me if I kiss her 70 times; 70 eggs will turn me into an incubator; and 70 cups of coffee will explode me. So please put it off as long as you can.

Surely that delightful greeting made the little girl happy. But think what it did for her grandmother, the famous actor's housekeeper!



This anecdote would have been utterly unbelievable to the many people who knew of William Hooker Gillette as a handsome, beautifully mannered, ramrod-straight Hartford patrician who, although a matinee idol in America and England, kept all but his closest friends and neighbors at a polite arm's length.

As for tourists who had seen or heard about Gillette's pseudo-Rhenish castle perched on a cliff above the Connecticut River at Hadlyme, they probably concluded he was a notoriety seeker or a well-heeled kook playing in the same ball club as Mad Ludwig of Bavaria, who also had a real story book castle perched on a cliff.

He was neither. Instead, he was an extremely complicated man in the sense that he successfully combined the talents of a playwright, an actor, a director, an inventor, an interior designer, a hard-headed business man, and a gadgeteer par excellence. As if that were not enough, he was also a famous cat-lover; a ticket-collecting motorcyclist; a yachtsman; and the designer, owner, and whistle-tooting engineer of a three-mile, built-to-order railroad on his estate. But topping all these achievements was his creation of the role of Sherlock Holmes on the American and British stages.

Sherlock was Gillette

If the name "Sherlock Holmes" conjures up a vision of a tall, gaunt man with a calabash pipe, a deerstalker cap, an Inverness cape, buttoned shoes, and a very British checkered suit, it is not because Sir Arthur Conan Doyle, his creator, "saw" Sherlock that way. Early illustrators had visualized him in various ways, one presenting him as a chubby little man wearing a bowler. It was Gillette and Artist Frederick Dorr Steele's sketch of Gillette that made the costume mandatory for every subsequent actor cast in the part, including such notables as Basil Rathbone, John Barrymore, and Raymond Massey.

When Gillette went to England to visit the author for the first time, Doyle was surprised and delighted when Gillette stepped out of the train wearing the deerstalker, cape, and buttoned shoes.

It is ironic that the man who intuitively knew how to dramatize and visualize Sherlock Holmes, and who made himself a millionaire doing so, didn't really like Sherlock Holmes stories. But Gillette was a business man who once said he took up playwriting, producing, and acting "for the sole and only purpose of making money in greater measure than he could make it in any other decent way."

He regarded himself as "a merchant of the theatre." He knew what the public liked and how to give it to them. The first Broadway play he wrote and starred in as an absent-minded professor was a hit, probably because he loaded it with 300 carefully selected jokes.

Realizing that the Sherlock Holmes stories were tremendously popular in America, Gillette and his producer worked out a royalty deal for stage rights with Conan Doyle, who told him he could take considerable liberties with Sherlock in his plays. "Murder him, marry him, do anything you want with him," Doyle said. And that is just what Gillette did when he finally found time to write the play. He completed it in only four weeks, while resting up after a long road tour. The night after Gillette handed the finished script to his secretary, to send to New York, the secretary's hotel burned to the ground, and the play with it. Gillette had made no copy, so he batted out another script from memory in less than a week.

Many people thought the Sherlock Holmes plays were merely stories Doyle had written and Gillette had adapted for stage presentation. That is not so. They were Gillette's creations. He would incorporate two or three of Doyle's characters or situations into a plot that was original.

1300 Performances

The Sherlock play opened in Buffalo late in 1899, with Gillette as Sherlock. By the time he gave his last performance 33 years later, he had acted in the part more than 1,300 times. Although the respected New York "Tribune" had panned the play in New York, the delighted public parted with millions of dollars to see the original run, revivals, and road companies. (By 1903, there were Sherlock companies in 12 countries). Since Gillette was his own playwright and director, millions of tax-free dollars ended up in his pocket, even after deducting Doyle's royalties. (Gillette Castle cost him more than \$1,000,000).

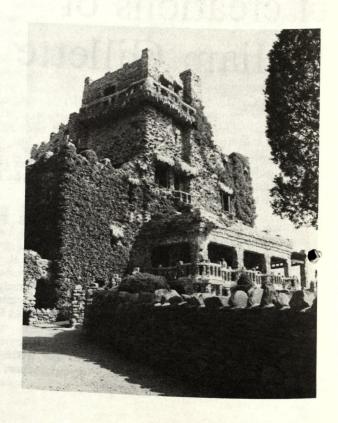
The show opened in London in 1901 with eight curtain calls for the cast; but when Gillette came out to

take the playwright's bow, the audience, for reasons unknown, booed him for several minutes. The unflappable Gillette stood in dignified silence during the uproar. Then when the crowd had booed itself out, he delivered a dignified squelch that made many in the audience blush for their boorish countrymen.

His revenge was sweet, though not of his own making. A few months later, a special presentation of the play, complete with programs printed on heavy white satin, was held at the same theatre in honor of King Edward VII and Queen Alexandra. After the performance, Edward paid Gillette the honor of visiting him in his dressing room. On another occasion, Edward is said to have summoned Gillette to the royal box and chatted so long that the show was delayed an hour. Since it isn't cricket to leave a gathering ahead of the Royal Family, the audience just sat there. (One wonders whether the paths of hard-working Gillette and Edward's chum, glamorous Lily Langtry, ever crossed. It is difficult to believe they did not.) Nor was Edward his only admirer. Charles Dickens' granddaughter wrote asking him for his autographed photograph, enclosing one of Charles Dickens' signatures in return.

Helped beginners

In 1905, Gillette wrote a one-act play about Sherlock. There was one part for a young boy. In London, a promising 12-year-old turned up, and Gillette offered him an audition the next morning. It seems incredible, but the youngster did not know how to read or write, so his mother kept him up all night learning his lines by rote. He won the part and did well in it. Later, Gillette gave him a fatter part; and after that, the young fellow went to America, where he shuffled into a rather noteworthy career in movies. His name was Charlie Chaplin.



Gillette, a widower with no children of his own, helped other young people make their marks in show business. An actress in her early teens was in the cast of an American presentation of James Barrie's "Dear Brutus," in which Gillette starred. She was obviously talented, but all during rehearsals, right up to opening night, she was haunted by self-doubt.

Gillette went to fantastic lengths to bolster her confidence. He took pains to pass along words of praise he had heard about her. He would send his Japanese valet to tell her he had something important to say to her; then when she stopped by at his dressing room, he would give her a silly toy to make her laugh and relax, or tell her about his blunders when he was a beginning allor. Just before curtain time on opening night, although he was in his sixties, he climbed four flights to her dressing room to tell her she was going to be "magnificent." She was - and during intermission her was packed with actors and actresses congratulating her. Today, Helen Haves is the Great Lady of the American Theatre. Later in the run, he helped another great actress, Judith Anderson, get a chance to demonstrate her talent.

In the London performance of "Secret Service," which Gillette wrote and starred in, he provided a bit part for a hopeful young actress and made her understudy for the star. One night, the star became ill. Young Ethel Barrymore took over, turned in a hit performance, and was on her way to fame. Years later, she co-starred with Gillette in a benefit for the Metropolitan Opera.

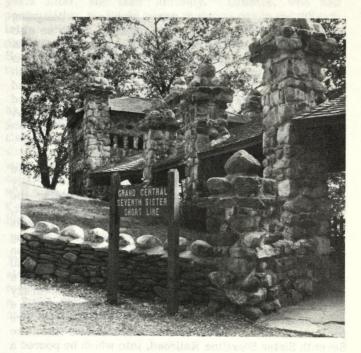
Retirement

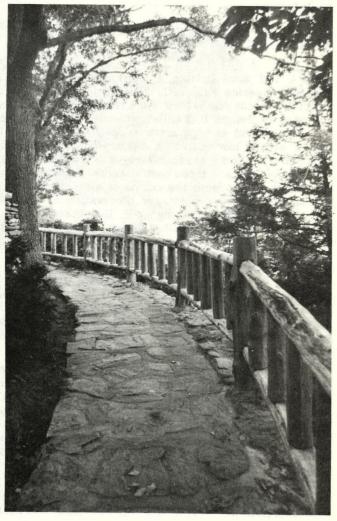
Outwardly a magnificent physical specimen, Gillette was plagued by ill health, which his relentless schedule of playwriting, acting on both sides of the Atlantic, and directing did nothing to relieve. After writing 20 plays and performing in nine of them, he retired in 1919 to what is now called Gillette Castle in Hadlyme. (Actually, he had tried to retire in 1910, but within a year or two was going full speed again). He had started building it in 1912 and named it "The Seventh Sister" because it was on the last of a chain of seven hills along the Connecticut River. (In Sussex, England, there is also a Seven Sisters chain, to which Conan Doyle's Sherlock Holmes retired.)

Gillette had not intended to retire to Hadlyme. He had selected Greenport, Long Island, and had structural steel for a new home sent there. One day, he cruised up the Connecticut in his yacht-sized houseboat, named "Aunt Polly" after a Southern mammy who had taken care of him when he was ill in North Carolina. He was so impressed by a picturesque cliff overlooking the river rethe Chester Hadlyme ferry that he bought it and 132 acres around it.

A castle is born

Remembering a castle he had seen far above the Rhine, he decided he would have one too. So he ordered the steel shipped over from Greenport, built an aerial cable tramway to haul materials and workmen from the landing to the summit, quarried out the native stone on





his property, engaged a contractor and 30 or 40 workmen, and spent the next five years building. There is no truth in the yarn that he had had a European castle dismantled, stone by stone, and shipped to Hadlyme.

Gillette was his own architect, designing everything in, on, or around the building, which he also designed and constantly redesigned to incorporate all his ideas. Disliking exposed metal — some said he was afraid of lightning — he faced all metal girders with rock, carved light-switch handles out of wood, and invented ingenious wooden locks for the 46 hand-adzed doors (no two alike) of flawless southern white oak. A ship's carpenter made most of his furniture in a shop on the premises.

During his acting years, Gillette's considerable mechanical ability had led him to invent a commercially successful sound-effects machine to simulate the clippity-clop of galloping horses. Now, in his retirement, the castle set him loose on a spree of inventing gadgets that turned it into a wonderland of disappearing stairways, hidden doors, secret locks, furniture rolling on tracks, monitoring mirrors, a secret tower room, and other creations that would have made Rube Goldberg, a contemporary cartoonist who thought up crazy inventions, green with envy. Gillette also invented a very practical sprinkler system for the castle's fire protection. But his real masterpiece was the The Seventh Sister Shortline Railroad, into which he poured a small fortune.

All aboard

A tall man striking a Sherlock pose entered a Hartford machine shop in 1927 and said, "The name is Gillette. I want you to build me a railroad." Completing rolling stock designs that Gillette had developed as far as he could without an engineering education, the shop built him a steam locomotive, a battery-powered electric locomotive, two seven-passenger "Pullmans," observation car, and three open coaches. (Innards of the steam locomotive were the engine of a Stanley Steamer automobile). The 21-passenger observation car was so long (24 feet) that he designed it like the articulated trains that railroads adopted later, with "caterpillar" joints to keep it on the track around curves. Speed was 20 miles an hour.

The only time his train derailed was when a saboteur tampered with the track's flanges, causing a car to hang perilously over a bank. Luckily, the car stayed right side up, but one of the four passengers had to scramble down to the road below and walk several miles for help.

The railway's main terminal was a stone building, still standing, near the castle. Gillette named it "Grand Central." Another terminal farther out was "125th Street." He blasted through rock to have real tunnels and built carefully engineered trestles over gullies. He had a roundhouse, a repair shop, switches, turnouts, and signal systems. There were three miles of tracks running through beautiful scenery.

Neighbors' children were welcome passengers and were served ice cream by his Japanese servant.

Although Gillette did not drink, older passengers got, and needed, cocktails after he indulged his speed mania by taking curves without braking, while tooting wildly on the whistle. Among the famous whom he railroaded around the estate were Albert and Mrs. Einstein, who enjoyed it immensely. (A bit of a change from equations, you know.)

Gillette's railroad is no longer at the castle. After the State acquired the property from Gillette's estate, the railroad was dismantled and sold. Nevertheless, the three-mile right of way of the line is still in evidence and serves as part of a group of picturesque walking trails open to visitors at the castle.

Cat happy

Gillette was enchanted by cats. Normally, a star making his first visit to a theatre where he would be performing would pay his respects to the owner or manager. Not Gillette. He would ask a stagehand to introduce him to the theatre's cat. Once acquainted, the cat had the run of his dressing room as long as the play ran. The manager played second fiddle to the cat.

At the castle, there was a nucleus of three cats—Louise, Ann, and Joseph — but one visitor reported having seen 17 live ones and about 60 representations of cats in the form of mantle decorations, doorstops, pictures, or ceramics. Cats ate in the main dining room with Gillette and his guests, but they had been trained to wait for the humans to eat first. The cook prepared special treats for them, and the Japanese butler treated them like other guests. Cat Joseph accompanied Gillette on his cruises in "Aunt Polly."

To keep them from getting burned while prowling under the window seats in the castle, which concealed big hot-water radiators, Gillette installed wire screening to keep them at a safe distance. Screening also kept them away from radiators hidden in the masonry.

Despite his wealth, Gillette's taste did not run to expensive exotic cats, a fact made crystal clear in an advertisement he inserted in the Deep River "New Era":

Two perfectly black Tommy kittens to be given away...not Persian, Angora, or Siamese, but real cats. They come of a family of great mousers. Anyone wanting one or both must write stating qualifications. That is, we want to be sure that they do not go to stupid boobs who don't know what a cat is. Would like to have recommendations from last cats you lived with. Address: W.G., Box 67, Hadlyme, Connecticut.

Nice people don't

Considering the eccentricity of the castle and Gillette's odd life style, it is hard to believe that he grew up in a hotbed of respectability in Hartford. With a mother descended from a founder of the city, and a stern, taciturn father who had been Phi Beta Kappa and



valedictorian at Yale and a U.S. Senator, Will's tea leaves undoubtedly called for four years at Yale, perhaps a law or medical degree, the right clubs, a well-born bride, a contingent of kids for Groton and Miss Porter's, and a decent burial in a Farmington cemetery. As it turned out, the only detail of this J.P. Marquand scenario that came to pass was the Farmington burial.

Intrigued by the stage and active in theatricals at Hartford Public High School (which produced another famous actor, Gillette's contemporary, Otis Skinner), Will decided to make the stage his career. This did not please his family. In its milieu, the stage was perhaps all right for silver-throated Irish tenors or baggy-pants German comics, but somehow declasse for nice people. Even going to plays was not universally accepted. Will's dour father, for example, refused to let him see any play not written by Shakespeare.

This created a problem for Will and his cousin when a play they dearly wanted to see — Dion Boucicault's "Colleen Bawn" — came to Hartford. They decided to outsmart Senator Gillette. Will owned a printing press, so they obtained a picture of Shakespeare, put it on the press, and printed a caption reading: "William Shakespeare Writing 'Colleen Bawn.' " It worked and they saw "Colleen." Decades later, Gillette told the "New York Times," "It was years before I knew my father had let us go to the play because he really admired our sublime nerve."

Graduating from high school, Will passed up college and set out to get a stage job. Heading south and west, he persuaded theatres to give him bit parts, sometimes working free to gain experience. He then developed his on act as an impersonator of well-known people.

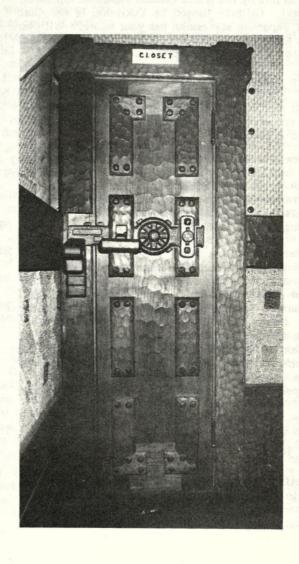
Mark Twain, a Hartford neighbor, apparently took such a dim view of Will's acting ability that he recommended him to a theatrical producer friend — as a joke on the friend! However, by the time Gillette had become sufficiently professional to write his first play, Twain had enough confidence in him to become its angel and make production possible. Gillette starred in it. Despite poor reviews in the sticks, the play had a long run in New York and made money for him.

Tragedy and comeback

In 1882 he married Helen Nickles of Detroit. Six years later, she died suddenly. Gillette, who had promised her he would never remarry, never did. Years later, friends visiting him at the castle noticed a photograph of a beautiful girl child and asked who it was. He did not know but cherished it because she looked so much like Helen.

His wife's death and his recurring ill health sent him into a tailspin. He gave up acting for almost five years, retiring to a two-room cabin he built in the North Carolina mountains. He found it healing to mix with the simple mountain people, and they liked him and welcomed him into their homes. To them, he was not a celebrity but "the kind, good-natured, funny gentleman who always had the right thing to say to the children and gives you a word, too, that makes the day seem brighter just for his passing."

During this period, he wrote plays to earn money. The first to be produced was a resounding flop and almost ruined him financially. So he came out of retirement in 1897 and starred in two of his biggest hits: a farce and a Civil War melodrama, which has been called the first serious play about the Civil War.



Then, in 1899, he struck it rich with "Sherlock Holmes," which he wrote and in which he starred. It made him world famous and a millionaire. As recently as 1974, "Sherlock" was an instant hit when revived in London and New York by the Royal Shakespeare Company. A London first-nighter said it was "greeted with yelps of joy." John Woods, who played Holmes, became the hundred and ninth actor to do so.

The Tokyo connection

In the 1890s, Gillette hired Japanese-born Yukitaka Ozaki as houseboy on his yacht, later making him his dresser. When he retired, he took him to Hadlyme as valet and general factorum and gave him life use of a small house near the ferry landing.

Ozaki had been well educated in Japan, but he and his brother had to flee to America because they were of a political family opposed to the militarists. The brother later returned, but Yukitaka remained here, working at menial jobs.

One day, Gillette's newspaper reported that the Japanese cherry blossoms along the Potomac were in bloom, mentioning that the 3,000 cherry trees which the mayor of Tokyo gave to Washington had been officially presented in 1912 by the world-famous Japanese diplomat, Yukio Ozaki. Gillette turned to Yukitaka, "I see that that great Japanese statesman has your name." With no change in expression, Yukitaka replied," Excuse, please, Mr. Gillette. He is my brother."

When Ozaki grew older, Gillette hired another Japanese, Fukumatsu Tsubone, to help him. When Fukumatsu died, Ozaki buried him in the cemetery near the ferry and ordered a tombstone with an inscription in Japanese characters.

A few years later, Ozaki died. Gillette's Yankee neighbors had liked him and the little donkey he rode around town, so they chipped in for a tombstone, ordering it inscribed with the same Japanese lettering as Fukumatsu's, assuming it meant "Rest in Peace" or some kindly thought.

So far, so good. Some time later, however, a Japanese industrialist came to America with his son to burn incense at the grave of their relative, Ozaki. They were in for a surprise. Why, they wanted to know, was a stranger named Fukumatsu Tsubone buried in the same grave as their honorable uncle — especially when Fukumatsu also seemed to be buried in a nice grave of his own next to Ozaki's? For they knew something the well-meaning townsfolk didn't know when they ordered the Japanese lettering on Ozaki's stone; namely, that it did not spell "Rest in Peace." It spelled "Fukumatsu Tsubone."

Farewell tour

Gillette's second retirement lasted longer than his first; but in 1929, when he was 75, he was persuaded to make a one-season farewell tour. It was such a glorious success that it was extended for another season and then

for another. Ticket lines circled the block. Grandparents who had seen him play Sherlock when they were young brought their grandchildren. Audiences rose when he made his entrance. Novelist Booth Tarkington wrote him the most moving tribute of all: "I would rather see you play Sherlock than be a child again at Christmas."

Universities, including Dartmouth, Yale, Trinity, and Columbia, showered Gillette with degrees. Eminent professors, who probably had considered his plays lowbrow at first, took a second look at his life's work and discovered he had pioneered in improving acting methods and in creating acceptance for American playwrights and actors. Not too long before Gillette, many of the personant second in American theatres had been imports from England, performed by English actors. Acting had consisted of bombastic declamations, histrionic posturing, and wild-swinging gestures that bore no resemblance to life. It was the style we now associate with ham actors butchering Shakespeare and still vestigially present in grand opera.

From the very first, drama critics and reviewers had welcomed and praised Gillette's innovations. Now it was doubly sweet to hear it from the intellectuals. Actually, the my-kingdom-for-a-horse style of acting would have been impossible for Gillette with his ingrained New England reserve. Instead, he introduced



the realistic acting that still holds sway. Stage speech resembled real life. Pauses became meaningful. The timing of lines and gestures was used to intensify emotion. Stage sets and lighting were designed realistically to accent the action. In some of his scripts, stage directions take up far more space than the actors' lines and are given in minute detail.

Curtain

In 1935, at the age of 82, he went on a second farewell tour. His last stage appearance was in Hartford, February 27, 1936. He died on April 29, 1937 and was buried in the Hooker family plot in Farmington's Riverside Cemetery. There is no mention of Fukumatsu Tsone on his tombstone.

The castle and land, which had cost Gillette well over a million dollars, were put up for sale. It is said

that it was offered for \$125,000 to the former King Edward VIII, who had abdicated dramatically in December, 1936, to marry the American divorcee, Wallis Warfield. Another castle was just what the Duke didn't need. It is also said to have been offered to Katherine Hepburn.

Finally, the State of Connecticut agreed to buy it for \$30,000 . . . but found that it couldn't get up more than \$20,000. The private Connecticut Forest and Park Association of East Hartford came to the rescue, as it so often has when the State has wanted desirable park properties for which it has not had enough money. The Association raised the \$10,000 in two months, with the cooperation of the Audubon Society of Connecticut and the Twilight Club of Hartford. Today admission fees from the 100,000 sightseers each year who visit the castle amount to far more than the purchase price of the property.

Guides From page 2

Sister" because it was on the last of a chain of seven hills along the river).

Another of the public's foibles that baffle, amuse, or occasionally irk these good-natured, patient guides are certain visitors' vigorous assertions that the castle once contained exhibits or architectural features no longer visible. For example, one wanted to know what had become of the suit of armor which used to be there and which she personally had seen. Answer: wrong castle! There never had been a suit of armor there.

Another sightseer, convinced that standard equipment for Grade A castles was "places boiling oil could be poured on enemies from," wanted to see Gillette's. A like-minded medievalist demanded a tour of the doesn't exist. dungeon, which Gillette, a kindly man, could easily have been elected "1913's Man Least Likely to Build a Dungeon or Pour Boiling Oil" even to exterminate theatre critics, whose bad reviews he blithely ignored, or to discourage interviewers, whom he avoided like rattlesnakes.

The big fireplace in the twostory, balconied living room seems to be a magnet for astonishing gems of misinformation about the castle. One guide told of a visitor who wanted to know how come the wishing well in front of the imposing fireplace had disappeared. Another person was disappointed because "the waterfall" is no longer pouring over the fireplace. (Leaks, maybe, suggested one of the guides, but not of waterfall size.) Ironically, the castle does have a waterfall in it, and also a wishing well, but they are in a conservatory that opens off the living room. The waterfall is in miniature and cascades over small stones in the conservatory. Beneath it lived Mike and Lena, Gillette's pet frogs.

The wishing well is there, too; and the assortment of coins it gathers proves that Gillette Castle is an international tourist attraction. A framed display nearby exhibits tossed-in coins from forty-seven countries, including Somalia, China, Japan, Siam, the Philippines, Russia, Turkey, Hungary, Finland, Palestine, New Zealand, Argentina, South Africa, Luxembourg, and Yugoslavia. Money tossed into the well goes to the Cerebral Palsy Foundation.

Equally far-out misconceptions that the guides encounter center about the strange light switches Gillette designed. Instead of being a small lever sticking out of a metal plate, the handle of a large Gillette switch is a polished rod of hardwood about one inch in diameter and four or five inches long, resembling the long-handled switches in railway signal towers.

These odd, hard-to-recognize switches stick out from the walls all over the house, with several in the living room. One day, the girls overheard a visitor assuring a friend that the big handles enabled Gillette to elevate or lower the living room at will.

Still another visitor wanted to see the remote-control system which let Gillette open the front door without leaving his second-floor bedroom. There isn't any. However, for his own amusement, Gillette did have a system of mirrors that allowed him to see, from his upstairs room, what his guests were doing in the living room. There were those who claimed the mirrors also cued him on when to make a dramatic entrance via the balcony stairway.

Not all the questions or requests are so fanciful as these. In fact, the desire burning in the hearts of most of the female visitors is to see the castle's kitchen. No way! It is not open to the public, probably because it is so small and commonplace that it is not worth fixing up for public display. The rest of the castle is too hard an act to follow!

Supervisor of the students and a veteran on the castle staff is the knowledgeable Ed Sypher, who has been a seasonal employee since 1969. Backing him up is Wayne Kensel, a Middletown school teacher who works weekends until school closes in the spring and after it reopens in the fall, with weekday duty during the summer.

With so many things going for it — a breath-taking site on the edge of a cliff with stunning views up and down the Connecticut River; fantastic exhibits; a beautiful woodland picnic area; and a crew of enthusiastic guides who want you to enjoy their friend Willy's castle, is it any wonder it draws 100,000 visitors of all ages, sizes, colors, and nationalities every year? It keeps them busy, but think of the wonderful stories the girls take back to college with them every fall!



Getting into the vanguard...

By Jenny Mead, Massachusetts Audubon Intern

Americans are a strange breed. We cling stubbornly to our cars, reveling in the luxury of instant mobility, while hydrocarbons and other noxious gases fill the air and the OPEC nations tighten their strangle-hold on America. Only during energy crises, when gas lines stretch around blocks and the price of a gallon shoots upward, do we begin to realize that there are other, more economical means of transportation than the solitary commute in the auto.

The facts are fearsome. Currently, the nation has 65 to 70 million commuters, 50 million of whom drive alone every day. A primary source of pollution, the average car annually emits 900 pounds of carbon monoxide and 133 pounds of hydrocarbons. And the problem doesn't stop there. The large number of cars on the road helps to decrease our already dwindling fuel supply, creates tremendous congestion on the roads, and necessitates employers' spending large sums of months to construct parking areas.

Americans, however, are getting smarter. Increased energy and pollution awareness, coupled with rising fuel costs, led to a new trend in the 1970s: ridesharing. Traditionally thought of as carpooling, ridesharing also includes vanpooling, a form of transportation that can provide for between eight and 15 commuters per van per day, taking anywhere from seven to twelve or more cars off the road daily.

One of the first companies to promote vanpooling was 3M Company of St. Paul, Minnesota, which bought six vans in 1973. The program has been a great success; the company now operates over 110 vans and estimates that it has saved over \$2.5 million from reduced need for employee parking spaces as well as saving over 1.6 million gallons of gas. 3M's example has since been followed by over 250 companies throughout the nation which now sponsor their own programs.

What are the advantages of vanpooling? According to Runzheimer and Co., Inc., of Rochester, Wisconsin, transportation consultants, a 12-passenger van used for a 40 to 50 mile daily trip can save up to 9.000 gallons of gas annually by eliminating anywhere from nine to twelve cars from the road. A participating commuter who lives 20 to 25 miles from work can therefore save up to \$650 yearly in car operating expenses. A 12-passenger van, displacing nine automobiles, means an annual reduction in emissions of 3,700 pounds of carbon and 400 pounds of hydrocarbons.

In addition, vanpooling benefits both the community and the employer. By reducing traffic congestion especially at peak hours, air pollution, and the need for additional parking spaces, vanpooling is a boon to the community. Along with the savings on reduced parking space costs, employers find that vanpooling decreases employee tardiness and absenteeism, and that it promotes a sense of closeness among employees. According to a 1979 DEP Air Compliance Unit memo on ridesharing, "Most people get into ridesharing because of the money they save; they stay in because of the convenience and camaraderie."

Vanpooling is not a novelty in Connecticut, although it did not become widespread until the latter part of the decade. Southern New England Telephone was one of the first companies to institute a vanpool program in 1975. The State got into the act after the Federal Clean Air Act of 1970 and the 1977 Amendments to this Act required Connecticut to reduce automobile emissions to an acceptable level. To meet the federal standards, the State began its Commuter Incentive Plan (CIP), under which employers were to encourage employees to use mass transit or to participate in ridesharing programs. Although this plan doesn't impose any mandatory practices on employers, they are required "to report on their parking supply, commuting patterns of employees, and ride-sharing program plans."

Purchasing vans with federal and State dollars, the Connecticut Department of Transportation put 20 vans on the road in September, 1978, in a pilot program to ascertain the effects, problems, and feasibility of vanpooling. Currently leasing 94 vans to both State employees (65) and private companies (29) such as Connecticut Bank and Trust and Eastern Printing, the connecticut DOT is the largest vanpool operator in the state. Presently, there are no additional vans to be put into service, but according to Charles Gudaitis of the DOT, the program has been a success and they hope to purchase more vans in the future. Vans can be leased from third parties, such as the Hertz Company, and the DOT will help private employers secure vans from such companies.

Twenty of the State-leased vans serve the Capitol area, including the DEP. The length of the van commutes range from 40 miles round trip to a 120-mile

STATE EMPLOYEE VANPOOL PROGRAM

HARTFORD/WETHERSFIELD DESTINATIONS

Area of Trip Origin	Driver/ Coordinator	Work Telephone#
Waterbury	Thomas Durso	566-4379
New Haven	Abele Grillo	5550 Ext.
Bridgeport	Dennis Demchak	3160
Windham	Larry Bacon	3726
Plainville	Ronald Wentworth	2080
Meriden	Thomas Walker	3624
New Haven	John Eichler	3223
Middletown	Mary Wemett	2148
Monroe- Shelton	Victor Yanosy	3310
Waterbury	Richard Nicol	5120
Ellington	Brian Kenny	2690
New Haven	Thomas Ort	5205
Tolland- Vernon	Janet Richardson	3246
Torrington	Samuel LaRocco	5851
Enfield	Charles Barone	2414
Ellington	Jean Rieger	5710
Colchester	Greg Bonetti	8720
Terryville	Richard Anderson	3762
Lebanon	Robert Nejako	2773
Southington	Thomas Verchinski	5981
Haddam	Bob Waz	2690
Wallingford	Glen MacBeth	4259
Waterford	Martin McCue	2490
W. Willington	Richard Helmecki	4265
Orange	Fred Palmer	5543
cant mes sections		





round trip commute from Bridgeport to Hartford. According to Bob Waz of the DEP's Air Compliance Engineering staff, vanpooling is an economically feasible mode of transportation only for those who live 17 or more miles from their place of work; at shorter distances other forms of commuting are more economical.

After purchasing the vans, the State leases them to employees, who over four years reimburse the State for the capital costs incurred in purchasing the van. One volunteer becomes the designated driver/coordinator, responsible for fare collections, completing monthly reports, maintaining a minimum load of eight passengers, and making sure that the van gets regular maintenance and repairs. In return for these services and for driving, the coordinator has a free commute during the week and on weekends may drive the van within Connecticut for up to 250 miles at 12 cents a mile.

As the driver/coordinator of one of the vans, Waz has a 60 mile a day round trip commute from Haddam to Hartford. When the van is full, the monthly cost for each commuter is approximately \$33, a figure much lower than the cost of solitary commuting. The average cost of driving a car is 20 cents per mile, but it is only 5 cents a mile per person with a van. Waz estimates that his van saves an average of 400 gallons of gas a month.

The members of each vanpool come to an agreement on the rules of operation of the van. In Waz's van, smoking is not allowed and departure times are strictly adhered to. His van leaves both Haddam and Hartford promptly and, like Time, "waits for no man." According to John Eichler, Principal Air Pollution Control Engineer for the DEP's Air Compliance Unit, whose van makes the 75 mile a day round trip from New Haven, "People understand that if they don't make it on time, they will be left, just like other public transportation."

Waz is enthusiastic about the vanpooling program and its benefits. In a state which has "very limited public transportation," Waz says that vanpooling is the best means for hassle-free, comfortable commuting. One problem that he and several other driver/coordinators do encounter is keeping the minimum numbers of riders in the van. "If anything's a hassle," he says, "it's trying to keep the van full." Should the number of riders go below the minimum of

eight, the savings for the members decrease, but the State gives the driver/coordinator a 30-day grace period in which to recruit more passengers.

Keeping his van full is no problem for Dennis Demchak, a DEP Senior Air Pollution Control Engineer, whose daily commute from Bridgeport to Hartford is the longest of all the vans: 120 miles. Involved in the program since its inception, Demchak says, "The concept is excellent. You have the advantages of mass transit without the financial disadvantages. You also have the option of moderately personalized service." Demchak's van has always had the maximum 12 passengers, and there are people on the waiting list. Because the commute is so long and the van is one of the older models, the monthly costs are roughly \$50 for each passenger, still a savings over other forms of transportation.

Like Waz, Demchak is very enthusiastic about vanpooling. Despite "occasional aggravations," Demchak says that his particular vanpool is "very low-key, more like a giant carpool." One problem that Demchak did encounter was the lack of a back-up van. At one point, his van struck a deer and was out of commission for a three-month period during which the vanpool members reverted to carpools. However, the State now provides one back-up van, which helps eliminate such problems.

The response from members of the vanpools is invariably enthusiastic. One New Haven commuter commented, "As far as commuting, it's the best game in town." The attractive features of the vanpools, claim most commuters, are the savings and the sense of community and concern for others that is fostered by this form of transportation. "People get to know each other," says one commuter, "and that can make the trip a lot of fun." An additional advantage of riding the vans is the close-in parking available; a row of parking spaces designated for the vans is no more than 50 yards from the side entrance of the State Office Building.

Inevitable fuel price increases, along with the enthusiasm of those already involved, ensure that vanpooling is here to stay. Easy to join, a vanpool reduces air pollution, saves fuel costs and wear and tear on the private car, strain on the nerves from fighting rush hour traffic, and, as Demchak claims, is an excellent "environmental good deed for the day."

The hunter: a short history...

By Timothy E. Linkkila, DEP Wildlife Biologist

Each fall thousands of Connecticut citizens who swam, picnicked, golfed, gardened, or played baseball all summer take to the field to engage in sport hunting. Hunters come in different shapes, sizes, ages, sexes and from all ethnic backgrounds. They may be doctors, nurses, carpenters, teachers, or machinists. Whatever their origin and occupation, they all have one common characteristic—a love and respect for the outdoors and for the excitement of the chase.

Contrary to the beliefs of some, hunters are not "game hogs," "litterbugs," "poachers," or "gun nuts." However, like any large group of people, there will always be individuals who want to be members of the group, but whose actions are contrary to the values of the group. As the old saying goes, "It takes just a few rotten apples to spoil the barrel." Such individuals, who claim to be sportsmen and who often people identified by are the nonhunters as hunters, are the "game hogs," "litterbugs," and "poachers."

The evolution of sport hunting closely follows the evolution of man and society and has been shaped by their changes. Primitive man was a subsistence hunter, hunting for food. As societies developed and man became a planter and harvester, it was no longer necessary for everyone to hunt.

In Europe, prior to the settlement of North America, society had evolved to a point where only the upper classes of society could hunt. This circumstance had an important impact on shaping hunting in the United States.

The first Europeans to settle in North America were from the lower



classes of society and so had been denied the privilege of hunting. European history was not to be repeated, however. Wildlife in America has historically belonged to all the people and not just to special groups.

During the period of early settlement almost all citizens hunted to provide food. As the population increased, farms were developed, cities sprang up, and again a society evolved where it was not necessary for all citizens to hunt. Within this society there developed a group of specialized hunters known as market hunters. These individuals hunted for a living, harvesting great quantities of wildlife year round and shipping it to cities and towns for consumption. Under such constant pressure, wildlife resources began to dwindle and soon many species were on the brink of extinction. Concerned individuals recognized the rapid loss of wildlife populations which had once flourished and moved to remedy the situation by providing legal and game protection. Fish departments were established to regulations controlling develop Wildlife refuges were harvests. offer complete developed to protection to local wildlife populations. Market hunting became a thing of the past.

However, even with these positive steps it soon became evident that uncontrolled hunting was not the only problem that faced wildlife. Society's encroachments on wildlife habitats were destroying a basic Forests were being necessity. cleared, wetlands drained and filled, and prairies plowed under. counteract this habitat loss and degradation, monies were raised by taxes on firearms and ammunition which were earmarked for wildlife management. These monies, from the federal tax law known as the Pittman-Robertson Act, are returned to individual states to be spent on wildlife management. This law is important in that it ear-marked for the first time a user group (hunters) and put a tax on their sport to protect and manage a resource.

What began as respect and concern for the resource by the hunter has developed into modern programs of species management, firearms safety, hunter ethics, and landowner relationships. Today's hunter has a long history of concern and appreciation for wildlife and respect for landowner rights.

208 water quality management

Handling septage

By Peter L. Alagna

Approximately 40 percent of the population of Connecticut (or about 1.3 million persons) relies on individual or on-site systems, primarily septic systems, for the treatment of domestic sewage. Under normal maintenance, the settled portion of this waste, septage, is pumped periodically (every two to five years) and delivered to a septage disposal or treatment facility.

In 1978, approximately 79 million gallons of septage were collected and disposed of in Connecticut. During this period more than 34 million gallons of septage (about 45 percent of the total) was accepted at sewage treatment plants, and the remainder was handled by means of land treatment and other methods.

However, more and more communities with sewage treatment plants are closing their doors to their neighboring communities for the treatment or disposal of septage. Furthermore the siting of environmentally sound land treatment facilities for septage is often impeded by public reluctance to have such facilities in an area.

In recognition of this dilemma, the Connecticut 208 Program conducted a statewide study which inventoried all of the septage generated, disposed of and treated; examined the problems associated with these practices; and assessed alternative methods of septage disposal.

These disposal/treatment alternatives fall into three categories: (1) land treatment; (2) treatment in water pollution control facilities; or (3) disposal and treatment in a separate septage treatment facility.

Land treatment

- Application of septage to land areas such as crop land is a treatment alternative which may be quite attractive in rural areas. The process relies on the vegetation/soil structure to act as a treatment system in the recycling of nutrients, water, and organics. Septage, however. contains various contaminants including heavy metals, nutrients, and pathogens, which can have adverse effects on environment. Proper management of application techniques essential if this method is to be used. Particular attention must be paid to septage composition, climate, vegetation, cropping practices, and soil characteristics.
- Disposal at a municipal landfill is another septage disposal method practiced in the State. However, untreated septage has a high water content, making it an undesirable material for a landfill. Special handling would be necessary to prevent or reduce percolation of the liquid fraction of septage through the landfill to the water table. This may be accomplished in two ways: by dewatering the septage prior to landfilling and/or collection treatment of the landfill leachate. Both methods are costly and have been untried in the State.
- Septage lagoons represent one of the most common methods of septage disposal and can be one of the least costly. Connecticut uses lagoons in series in which the first lagoon is used primarily for settling and a second one is used for Lagoons are generally percolation. used for small septage disposal operations. Once filled, they are either abandoned or emptied and then re-used. The major drawback of this method is the unknown environmental impact. The wastewater which percolates from the second lagoon into the ground will contain nitrogen, phosphorus, organics (BOD and COD). pathogenic bacteria and viruses, and possibly some heavy metals.

Disposal at water pollution control facilities

Municipal wastewater treatment plants in Connecticut are able to accept septage for treatment in either of two ways. They may allow addition to the liquid stream, treating septage with the incoming wastewater stream, or the septage may be added to the sludge stream where sludge treatment processes are applied. In 1978, about one-half of the wastewater treatment facilities in Connecticut received in excess of 33.5 million gallons of septage.

The most prevalent problem associated with the addition of septage to a treatment plant is the "shock loading" that occurs when septage is introduced at a rate beyond the design and loading factor of a plant. One method of deal with this problem is to provide the plant with a receiving station and holding tank which would permit a controlled discharge and thus minimize the hydraulic and organic shocks.

Treatment in a separate facility

- l. Composting allows the conversion of waste materials such as septage or sewage sludge to a highly desirable, stable compound that can be used as a soil additive, supplying nutrients for vegetative growth.
- 2. Lime stabilization/sand bed dewatering involves the addition of lime to septage in sufficient quantity to maintain a high pH, stabilize the sludge, and destroy pathogenic bacteria. Lime stabilized sludges dewater well on sandbeds without odor problems. Sludge filterability can also be improved with the use of lime.
- 3. The chlorine oxidation process involves screening grit removal septage for transmitting it at a controlled rate to the chlorine oxidation units for adequate reaction and effective treatment. A drawback to this method is that it produces a material with a low pH and makes it difficult to dispose of through any of the land application alternatives outlined above.
- 4. Incineration is a means ultimate sludge disposal which must be preceded by pre-treatment and dewatering. Incineration is a two-step process involving drying and combusion after preliminary dewatering. Incineration reduces sludge to a sterile material and removes offensive odors, but may contribute to air pollution in an urban community.



CAM NEWS

71 capitol avenue hartford conn. 06115

Rising sea nibbles away at New England coast

About 15,000 years ago, the earth's glaciers began to melt. As they melted, the sea level in the world's oceans began to rise. And it's been rising ever since.

Three thousand years ago, the only fish on George's Bank, an area that begins 50 miles off the coast of Cape Cod, were those washed ashore by the tides. Today George's Bank is the world's richest fishing ground, deep under water. As the rising sea has claimed George's Bank, so it persists in its advance toward land.

The rise in sea level is not constant. It may rise dramatically for a period of years, gradually for another period, and during some years the level may even fall. But the trend has been undeniably landward: the water level in the world's oceans has risen about 400 feet over the past 15,000 years. In New England, the sea moves inland an average of six inches every century. This may not seem significant, but considering gradual slope of the beach near the shore, a six-inch rise in sea level may bring the shoreline inland as much as 50 feet.

In the 50 years between 1922 and 1972, mean sea level measured in Beston rose about seven inches. During the latter part of this period, the climb was more rapid than average. According to Stephen Leatherman, a coastal geologist at the Environmental Institute at the University of Massachusetts, if the rapid trend of the past 20 years continues for the next 50 years, we will be witnessing the most rapid sea level rise in hundreds of years.

The main culprit in this assault on the coastline is glacial melt. As the earth's atmosphere warms, glaciers melt, adding huge volumes of water to the oceans. A popular theory among scientists is that man's use of fossil fuels in warming the earth's atmosphere, speeding glacial melt and thus the rise in sea level. The burning of fossil fuels produces carbon dioxide (CO₂), a gas which, when added to the atmosphere, creates what scientists call the "greenhouse effect." The CO, forms a lid over the earth that lets in heat from the sun, but prevents the earth from radiating heat back into space. The earth's atmospheric temperature thus rises, causing glaciers to melt faster.

What does this mean to people living in the Northeast?

New Englanders needn't worry that Cape Cod or other coastal areas will disappear under water overnight. As the sea rises, however, the region becomes more vulnerable to damage by coastal storms. The rising sea "prepares" beaches for rapid erosion by severe storms by gradually loosening the sand. In New England, winter storms - or "nor'easters" -conspire with the rising sea level to erode the region's beaches. Most every year, several nor easters strike the northeastern coast. Waves created by these powerful storms closer to coastal wash ever "Areas that were developments. storm-damaged in the past will suffer even greater damage in future storms," warns Dr. Leatherman.

Barrier islands - coastal islands which are bordered by the ocean on one side and a bay or cove on the other - receive the brunt of the waves' action. The advancing sea causes these islands to "role" landward - sand on the seaward side is forced landward as tides rise to ever-higher levels. Along the U.S. eastern coast, barrier islands move landward at the rate of 100 to 1,000 feet per century, reports Dr. Leatherman in his Barrier Island Handbook.

Man can't turn back the tides, but he can try to defend himself against them. A coastal planner suggests coastal states in New England can minimize the negative effects of rising sea level by encouraging recreation rather than development on vulnerable beaches. As the sea comes ever closer, then it will swallow sand instead of buildings.

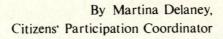
This article was prepared as a public information service by the New England River Basins Commission.

Septage From page 14

Screening conditioning dewatering facilities can be utilized exclusively for the treatment of septage. Based on pilot plant studies, screening can be utilized to remove 25 to 50 percent of solids, rendering the septage more manageable for piping, valving, and pump operation. Chemical conditioning involves the application of ferric chloride, lime, alum, or a combination these. This treatment captures the organic and inorganic solids of the screened raw Some of the dewatering septage. techniques include sand drying beds, centrifugation, filter press vacuum filter dewatering.

The next task of the 208 Program will be to identify those communities in the State with little or no septage disposal capacity. These communities are urged to closely examine the alternatives outlined above in a detailed report entitled "Alternatives for Septage Treatment and Disposal," available at the 208 program's office.

By Joseph M. Rinaldi, 208 Public Participation Coordinator, P.O. Box 1088, Middletown, Ct. 06457





For Your Information

The following is an open letter to Conservation Commissions from Tom ODell President of The Connecticut Association of Conservation and Inland Wetland Commissions:

Another Connecticut Conservation Commission Disbands!

The primary agency for environmental enforcement at the local level quietly disappears

If you are alarmed at the above -you should be. If you're not -- you should be! It's happening with should be! increasing frequency throughout Connecticut. But there are no headlines, tears, or gnashing of teeth. A few concerned citizens may ask why, others may be relieved because an adversary is gone, but most of the local constituency simply do not realize that their best vehicle for ensuring the wise use of their town's natural resources has been scrapped. Herein lies the main reason (s) for a conservation commission's demise. Commission members fail recognize the power of an informed constituency. They fail to develop an effective means of communicating with the community they serve. They fail to recognize that because a conservation commission has virtually no regulatory power it has almost unlimited ability to educate by speaking out on environmental issues. And, considering the above, the commission then fails to achieve (or recognize) its potential as the most effective environmental enforcement agency presently in service at any level of government.

At a local level, there are no less than 18 possible boards and/or commissions that a municipality has State statutory right to create, which are supposed to implement and enforce environmental law. addition, there are at least eight positions which a community might fill to provide full or part-time enforcement of environmental regulation. Besides these State statute authorized agencies and positions, there are other local creations which influence land use decision making. For example, town planners, town engineers, town attorneys, and environmental directors, to name a few. Just think of an agency, or paid regulatory position in your town, and odds are that it has some finger in the environmental pie. Now if you were new to the scene, and there are countless new appointees each year, the complexity of working in this bureaucratic environment would appear to be the proverbial ball of wax. Survival of fledgling conservation commissioners appears to be directly related to their ability to wend their way through the maze of the regulatory bureaucracy and attain a sense of belonging and achievement; it takes patience, tenacity and energy! The first year is critical. If there is a well established program to grow with, and enough guidance and freedom to develop one's own ideas, then roots are likely to develop --we feel effective, and the community is well served. But if a conservation commission gets bogged down in struggles to maintain or develop its own regulatory niche

and/or is waiting impatiently for someone to call for help (which seldom happens) then there is a gradual dissipation of energy, resignations are tendered, and another conservation commission disbands.

From a statutory point of view the conservation commission would have to the greatest responsiblity for environmental protection. The General Statutes read, "Any town, city or borough, by vote of its legislative body, may establish a conservation commission for the development and conservation of natural resources, including water resources, within its territorial limits." Further on, the statute gets into the "shall" and "may" jargon that delimits the regulatory responsibility of state authorized local agencies. The "shall" and "mays" of the conservation commission statute essentially provide no regulatory for the conservation commission (at least it hasn't been But they do mandate a responsibility for providing the community with information and education on the wise use of its natural resources. In Connecticut the degree to which a conservation commission meets this responsibility, and it's a big one, depends on the sincerity of the governing body of the community when it appoints commissioners, the approach the commission takes in meeting this responsibility, the entrenchment or niche protection of other local agencies that have regulatory responsibility, the assistance and encouragement extended by state government, and, most important, the decibel level of local citizens in demanding a quality environment. The well informed local citizen is the key to environmental enforcement; that's why the information-education role of the conservation commission is so important!

A few years ago the Inland Wetlands Act was forced boldly on reluctant local governments. To date this is the most beneficial, locally implemented environmental law reach the ears of virtually all Connecticut citizens. Indirectly, waves of the Inland Wetlands Act have reached far beyond streams, ponds, and critical soils; it has stimulated concern for other critical natural resources and captured the attention of city hall. The economic impact of wetlands regulation via legal disputes (and this is just

beginning) had caused boards of finance (the sleeper in environmental enforcement) to take a second look at other potential environmental problem areas. Inadvertently this is how the Inland Wetlands Act has impacted on all environmental issues.

Last year the Bottle Bill was passed after several years of struggle. It was the citizen's voice, acting through representation, that enacted the legislation. But it took door-to-door diplomacy, not meetinga month complacency to educate and raise those voices. An informed, interested local constituency is the only effective enforcement a town, or state, or country, has. At the local level the responsibility for creating this enforcement power is the conservation commission. The Association Connecticut Conservation and Inland Wetland Commissions, Inc. (CACIWC), was formed to help commissions meet this responsibility. CACIWC can provide information-education, contacts, support, and ideas for developing an effective communication network. But ultimately they need your active encouragement and support. We urge you to contact members of your local commission and express your interest. If your community does not have an active commission we'd be glad to help organize one. Write to: Board of Directors, CACIWC, P. O. Box 5055, Hamden, CT 06514.

Environmental directory 80

The Department of Environmental Protection's "Connecticut Directory of Environmental Organizations 1980" is now available. This directory lists affiliates of national and northeast U. S. regional conservation organizations based in Connecticut along with statewide and local environmental and conservation groups.

Lake authorities, land conservation and nature centers and junior museums as well as agriculture and conservation related organizations can also be found in the 1980 edition. Copies can be obtained by writing to the DEP, Rm. 112, State Office Building, Hartford, CT.

The Land Trust Service Bureau has recently been established to

assist land trusts throughout Connecticut. These 73 local nonprofit organizations hold and manage over 11,000 acres of open space and The bureau will natural areas. provide legal, technical operational advice to the trusts. It is sponsored by The Nature Conservancy (TNC) and the Conservation Law Foundation. Its offices are located in Middletown at the chapter headquarters of TNC.

Land trust bureau

The Service Bureau Director, Suzanne C. Wilkins, was formerly head of the Long Island Sound Taskforce. Her initial project will be to compile an operational handbook for land trusts. Additional services will include periodic newsletters and meetings and workshops. People wanting additional information on the Land Trust Service Bureau or interested in starting a land trust for their town can contact Ms. Wilkins at 344-9867. Or write to the Land Trust Service Bureau, Box MMM, Wesleyan Station, Middletown, CT 06457.

Town officials' powers

The publication, "A Summary of the Powers and Duties of Town Officials Involved in Land Use Decision Making in Connecticut," has been updated to be consistent with the revised 1979 General Statutes of Connecticut and is available. Originally "Powers and Duties" was compiled for use in the Cooperative Extension/Department of Environmental Protection seminar course on "Local Control of Land Use in Connecticut." Copies can be obtained by writing DEP, State Office Building, Room 112, Hartford, CT 06115.

Water Resources seminars scheduled

"Water Contamination - Risks and Solutions" is the title of the 1980-81 seminar series sponsored by the Institute of Water Resources at The University of Connecticut in Storrs.

Future speakers and their subject areas are: Dr. James V. Tracy, U. S. Geological Survey, "Analysis Va., of Reston. Contamination," Groundwater October 15, 1980; Dr. Paul Bush, Malcolm Pirnie, Inc., White Plains, N. Y., "PCBs in the Upper The Proposed Remedial River: Program," November 19, 1980; Connecticut Charles Fredette, Environmental Department of Protection, "The PCB Problem in the Housatonic River," and George R. Curry, Connecticut Department of Health, "PCBs -Acute and Chronic Exposure in Human Health Effects," both on December 17, 1980.

G. C. Wagner of Pfizer, Inc., Groton, "Recycling of Industrial Wastes Back to Agriculture," January 21, 1981; Dr. Jan Stolwijk, the John B. Pierce Foundation, New Haven, "Risks of Toxic Substances in Water to Human Health," February 18, 1981; Dr. Philip C. Kearney, U. S. Department of Agriculture, Beltsville, Maryland, "Degradation of Chemical Wastes," March 18, 1981.

Dr. Peter Rich, Biological Sciences, The University of Connecticut, "An Annual Budget of Redox-Active Materials in a Lake"; Dr. S. Ruven Smith, Chemistry Department, The University of Connecticut, "Polycyclic Aromatic Hydrocarbon Pollution in Water Systems," and George E. Hoag, Civil Department, Engineering University of Connecticut, "Rational Biological of Rotating Design Contactor Wastewater Treatment Processes," on April 15, 1981.

Seminars will be presented at 3:30 p.m. in Room 200, The Nathan L. Whetten Graduate Center, The University of Connecticut, Storrs. The April 1981 seminar will begin at 3:00 p.m.

The seminar series is open to interested private and public groups and agencies as well as academic community members as part of a continuing effort of the Institute to bring information concerning our vital water resources to the public.



The success of a local land trust can be measured by acres it owns... number of gifts... memberships... special programs

The following is the second half of a two-part article on establishing and operating local land trusts. Attorney Jack Gunther founded the New Canaan Land Conservation Trust in 1967 and has served as its president and been active in land trust activities in the State ever since.

Conservation Easements in Perpetuity

Under the terms of a conservation easement in perpetuity, the owner of the land relinquishes the right to have the land developed, assuring that its natural beauty will be preserved as open space. The advantages of the open space easement are that the donor of the easement continues to own the land and retains the provisions of the easement. No question of public access is involved, and the land may be sold subject to the terms of the easement. Since no change in ownership is involved, easements are not a consideration in the application of zoning regulations. The land trust is relieved of any potential maintenance expense or increase in exposure to public liability suits. A right of inspection should be retained when needed to monitor the terms of the easement.

A landowner giving a conservation easement in perpetuity on a potential building site is entitled to substantial federal income tax and real estate tax benefits (long term capital gain property). Under Revenue Ruling 73-339, the amount of the federal income tax deduction is measured by the difference between the value of the land before the granting of the easement (building site) and its value after the granting of the easement (open space). The assessed value of the land for local real estate tax purposes will be reduced to

reflect the substantial diminution in the value of the land resulting from the restriction on development. The remaining use as open spaces does not involve any costly drain on town services, and the open space has a beneficial effect on property values in the community. Deductions for easements will terminate on June 14, 1981, unless the tax law is changed.

In working out the details of a proposed gift, land trust officials should keep in mind that in some cases a conservation easement can be more desirable for the land owner and the land trust than an outright gift. The giving of conservation easements may be stimulated by announced programs of protecting certain natural resources, such as seeking easements on a strip along banks of a stream or pond.

An open space easement recently solved a problem for a group of 35 condominium owners. They owned in common an attractive two acres, separated by a stream from the main condominium complex, on which twelve additional units were scheduled to be built. The 35 condominium owners in the main complex did not wish to have the two acres of open space lost to development, but they found the real estate taxes on the two acres valued as potential building sites an unrealistic burden. They joined in placing a conservation easement in perpetuity on the two acres, and each received an attractive federal income tax deduction and the real estate taxes were substantially reduced to reflect the open space use. This was a welcome addition to the town's inventory of open space land and eliminated the potential drain on town services.

It should be pointed out that the open spaces covered by easements are permanent. By contrast, a land owner may withdraw his land from the open space classification under Public Act 490, subject to a penalty in certain cases, and the land may then be sold for development.

Lack of Communications

Local land trusts have been formed and operated largely on a town-by-town basis with very little communication among them. There has not been any permanent centralized advisory agency in the State for land trusts to call upon for assistance. The author recently worked with Patricia Scanlon, a student at the Yale School of Forestry and Environmental Studies, and Evan Griswold, Executive Director of the Connecticut Chapter of the Nature Conservancy, on the revitalization of a short-lived Land Trust Service Bureau formerly operated by the Conservancy with Mary Ann Guitar under a grant.

We circulated a questionnaire designed to seek out the everyday problems confronting land trusts. Among the problems reported were difficulty in finding prompt and effective legal advice, high expenses, lack of cooperation with town commissions, posting and patrolling properties, preventing litter and vandalism, maintaining public support and recognition, and lack of qualified volunteers to conduct daily operations. These are understandable problems, and they can be overcome.

Since land trust officials are typically citizen volunteers, they do not always possess the needed expertise or equally important the time required to deal effectively with the details inherent in land trust operations. However, the total effort and achievements to date have been superb. It should be pointed out that conditions for a land trust operation can vary greatly in favorability from town to town so that the same management effort will not always produce the same tangible results. Also, some land trusts have been in existence longer than others, and some place more emphasis on education than on open space acquisitions.

Measure of Success

The success of a local land trust can be measured by a number of factors in addition to meeting the criteria for acceptable land. One is the number of tracts and acres which it owns or on which it holds conservation easements. Another factor is the number of gifts of land and easements it has received since each gift can mean a time-consuming process and involvement with a variety of technical details. A third factor is the number of annual dues-paying members as well as the special programs it conducts to attract public support.

There is no way to predetermine whether any given land trust will be a success. Usually after it has been formed and its existence made known to the community, a surprising number of potential donors will express interest. Large land owners should not be pressured unduly. A more effective approach is that the land trust is available whenever a landowner wishes to discuss the possibility of making a gift. Aside from seeking tax benefits, a donor must also have a sincere desire to give his land in order that its natural beauty will be preserved.

Major Problems

Land trusts face two major problems. The first is the requirements of the "Facts and Circumstances Test" which must be met to qualify for "publicly supported" status (maximum income tax benefits) under the Regulations of the Internal Revenue Service. The second problem is the escalating cost of the premiums for public liability insurance.

"Publicly Supported" Status (Public Charity)

The Facts and Circumstances Test is designed to determine whether a land trust is so organized and parated "as to attract new and additional public support on a continuous basis." Essentially, a land trust following the practices and policies mentioned in this article in the subsection on "Public Support and Understanding" will meet all the requirements of the test with the exception of the "Ten Percent-of-Support Limitation." A detailed analysis of the Ten Percent Support Test is contained in the author's article on page 16 of the September 1978 issue of the Citizens' Bulletin, and the balance of the Facts and Circumstances Test is covered in the author's article on page 11 of the October 1978 Bulletin.

In the case of the typical land trust, a wide base of support from the general public is derived from a substantial number of modest cash contributions, usually in the form of dues. The total of these cash contributions can be disproportionately small in relation to the value of gifts of land. The large gifts of land received by the land trust cannot reasonably be expected to be contributed by the general public.

The troublesome test requires that at least ten percent of the total support received by the land trust during the four immediately preceding taxable years shall come from the general public. The full value of a large gift of land is included in the total support for the four year period. However, the value of the land can only be applied against the ten percent requirement to the extent it does not exceed two percent of the total support for the period. Accordingly, if the total of the cash contributions in the form of dues is not significant in relation to the value of the land, the land trust would be required to receive five large gifts of land in the four year period to qualify under the ten percent requirement (five times the two percent limitation on large gifts equals the ten percent). Large contributions of cash are subject to the same two percent limitation.

The character of the community in which the land trust operates, the availability of desirable open space land, and the number of potential donors who both wish to and can afford to donate valuable land place limitations on the ability of the land trust to receive five large gifts in the four year period. In any event, all local land trusts face a slowdown as the number of potential donors and the availability of open space land becomes exhausted, and only an occasional large gift of land for conservation purposes can be expected in the future. The exception made in the regulations for an "unusual" large gift of land may not help a typical land trust since its purpose is to receive substantial gifts of undeveloped land to be held for conservation purposes. Large gifts may not be either unexpected or unusual in the operation of the land trust.

The author strongly believes that since a land trust is a public trust, holding and managing its properties for the benefit of the general public, a typical land trust should be able to qualify for publicly supported status. He has suggested that the regulations be amended to exclude contributions of land from any determination under the ten percent-of-support limitation test. The other factors of the facts and circumstances test would be adequate to insure that the land trust exists for the benefit of the general public and not for a private gain.

Private Operating Foundations

This classification under the regulations of the Internal Revenue Service provides the same tax benefits as the publicly supported status—both are based on Section 501 (c) (3) of the Internal Revenue Code. Its advantage to a local land trust is that the amount or value of gifts is not a factor in qualifying for a private operating foundation status. For example, a land trust has received this classification by meeting an income and an asset test (alternatives to the asset test are an endowment and a support test).

Income test: At least 85 percent of the organization's adjusted gross income must be spent annually for its tax exempt purposes, such as land maintenance expenses, premiums for public liability insurance, and printing and mailing cost for annual meetings. Since the adjusted gross income excludes gifts and dues, the main items of income usually are interest and dividends. This test should be met easily by most land trusts.

Asset test: At least 65 percent of the organization's assets must be devoted to its tax exempt purposes. The open space land held by land trusts falls into this category making it feasible for land trusts to meet this test.

A land trust successful in qualifying as a Private Operating Foundation should receive its ruling from IRS in a shorter time than one applying for the publicly supported classification (an advance ruling for the first two years and then a final determination). However, more complex accounting procedures and IRS forms are required for retaining status as a private operating foundation.

The Trust for Public Land (82 Second Street, San Francisco) has prepared an excellent article on this subject entitled "Tax Exempt Status for Land Trusts."

Form 990

As organizations exempt from income tax, land trusts are required to file Form 990 (a new form has been issued this year). A question arises in reporting the value of donated land in the contribution column and the book value of the same land in the balance sheet. The amount of the contribution (also the amount of the donor's income tax deduction) is determined by the market value of the donated land. However, once in the hands of a typical land trust, the donated land cannot be sold or developed and must be kept by the land trust in its natural state. The question arises as to whether the land should be carried on the land trust's books at its contribution value, representing the market value of the land free of restrictions at the time of the gift, or should be reduced to reflect its value in the hands of the land trust.

In the case of a conservation easement in perpetuity, the value for the purposes of the contribution (the donor's income tax deduction) is determined by the difference between the market value of the land before the easement is granted and the value after the easement has been placed on the land and donated to the land trust. The easement given to the land trust is comparable to development rights which cannot be exercised or sold by the land trust. The land covered by the easement is freed forever from development, and the land trust usually incurs an obligation to monitor the terms of the easement. A strong case can be made in favor of assigning a nominal value to easements on the books of the land trust.

It should be noted that the benefit to the public is realized at the time the gift of land or an easement is made — the land will be preserved in its natural state.

Premiums for Public Liability Insurance

The alarming discrepancy in the premiums paid by local land trusts for liability insurance is covered in the author's article on page 15 of the March 1979 issue of the Citizens' Bulletin. The reason for the wide variations is the absence of a specific classification in the underwriter's manual for land trusts. There are not enough land trusts to warrant a classification at this time and a number of land trusts appear to be paying excessive premiums.

The premium for a land trust is now determined by analogy to an existing classification in the manual. The underwriter has a great deal of latitude in rating the sk of a particular land trust. It is essential that the underwriter be fully informed as to the location and size of land trust properties, public access and restrictions, activities permitted, supervision, posting, existence and condition of trails, structures, sidewalks or roads, and any accident experience to date.

It appears that the most appropriate manual classification to be used for the analogy is "Parks and Playgrounds." Using the park rate as a reference point, the land trust should seek a lower rate by establishing that the risks involved are less than those of a park.

It is unfortunate that unrestricted public access can create an insurance problem for a land trust by increasing the exposure to public liability suits. For example, the cutting of trails can create a duty to maintain them in a safe and usable condition. Such improvements can greatly increase the exposure to public liability suits compared to untouched land kept in its natural state.

A few land trusts rely on the protection afforded by Section 52-557g of the General Statutes, entitled "Owner of land available to public for recreation not liable, when." Essentially when a land owner makes his land available to the public for recreation without charge, the owner is only liable for willful or malicious failure to guard or warn against a dangerous condition. Recreation includes hiking and nature study. The statute, of course, does not provide any relief against the cost of defending a law suit. Also, there is a problem concerning the steps to be taken to notify the public that the land is available. Before relying on the statute, a land trust should seek the advice of its attorney as to how the statute applies to its particular method of operation.

Now under consideration is the possibility of a large insurance broker and an underwriter making available, as a public service, a comprehensive group program providing public liability insurance to local littrusts on a more uniform basis. The risk of local land trusts in general would be rated. Then the special risks found in the operation of particular land trusts, such as extensive walking trails, would be rated in order to arrive at fair premiums.

The purpose of this program would be to offer attractive premiums to encourage all land trusts, particularly those relying on the General Statutes, to carry adequate public liability insurance. All land trusts

could be hurt by litigation over the question of whether the open space lands held by land trusts can be placed in jeopardy by an unsatisfied judgment for damages in a personal injury suit.

Land Trust Check List

Time consuming legal and administrative details may be encountered in the operation of a land trust. The following check list should help you keep your land trust operating smoothly.

- Are you up to date in the filing of Bi-Annual Reports with the Secretary of State?
- 2. Is your appointment of Statutory Agent for Service up to date?
- 3. Are you up to date in the filing of Federal Income Tax Returns — Return of Organization Exempt from Income Tax (Form 990 for a Public Charity and Form 990PF or 990AR for a Private Operating Foundation)?
- 4. Following receipt of any ruling on your tax-exempt status, or on the deductibility of contributions made to your land trust, has there been any change in the purposes, character, or method of operation of your land trust which should be reported to the Internal Revenue Service (your District Director)?
- 5. Are you familiar with the exemption from State or Municipal Betterments Taxes (taxes for such improvements as water and sewer lines, sidewalks and streets)?
- 6. Are you familiar with the exemption from the Conveyance Tax on deeds conveying gifts of land or easements?
- 7. Have you obtained a bulk mailing permit from your local postmaster?

- 8. Have you obtained a Tax Exemption Permit under the Connecticut Sales and Use Tax?
- 9. Do you have a comprehensive Public Liability Insurance Policy protecting the Land Trust and its officers and directors?
- 10. If a donor has not completed his gift of land before the assessment date, are the real estate taxes due for the entire year in your town?
- 11. Do you have an accurate survey of each of your properties, preferably filed on the Land Records of your town?
- 12. Do you have an active group making periodic inspections of your properties to discourage littering and vandalism?
- 13. Before accepting a gift of land, do you make an inspection to determine the desirability of the acquisition and whether any unusual maintenance expense is involved?
- 14. Do you always enclose a self-addressed return envelope with any appeal for funds?
- 15. Do you offer to undertake the details of making a gift of land — surveys, appraisals, and preparation of deeds or easements — so that the donor has few out-of-pocket expenses, other than the fees of tax consultants?
- 16. If you wish to remove a building or other structure, do you try to avoid the expense of carting the debris to a sanitary landfill by seeking permission to demolish the structure and bury the debris since the land will not be developed?
- 17. Do you have a special class of membership to attract business organizations in the town?



Public Hearings

October 14, 1980, 10 a.m. Rm. 161, State Office Bldg., Hartford

To consider application of Gold Key Builders to install 32 feet of 24" culvert for a residential driveway crossing in a subdivision between Northwood and Cross Hill Roads in Monroe.

October 16, 1980, 10 a.m. Rm. 161, State Office Bldg., Hartford

To consider application of Burndy Corporation, New Milford, to discharge 960 gallons per day of treated wastewater from a new electroplating operation to the Housatonic River downstream of Rt. 202 bridge.

October 22, 1980, 10 a.m.
Rm. 221, State Office Bldg.,
Hartford
To consider application of Land
Fill Associates to store tires in
an impoundment adjacent to the
Quinnipiac River at the Hamden/
North Haven town line.

Permits Issued

Water Compliance

3/31/80: Town of Suffield To discharge to Stoney Brook no more than 1,345,000 gallons per day of wastewaters. Conditions.

5/20/80: Marlin Rockwell Company, Division of TRW, Inc., Plainville To discharge to the Quinnipiac River no more than 5,000 gallons per day of cooling water, 500 gallons per day of boiler blowdown, and the discharges from 3 interceptor wells. Conditions.

5/20/80: Alpha Plating and Finishing Company, Plainville To discharge to the Pequabuck River no more than 27,000 gallons per day of wastewaters. Conditions.

5/20/80: The Capitol Products Company, Inc., Winsted To discharge to the Mad River no more than 3200 gallons per day of wastewaters. Conditions.

5/20/80: The Nestle Company, Inc., White Plains To discharge to the Housatonic River at New Milford no more than 130,000 gallons per day of wastewaters. Conditions.

5/20/80: Beaton & Corbin Manufacturing Company, Southington To discharge to the Quinnipiac River no more than 34,000 gallons per day of treated metal finishing wastewater and 500 gallons per day of boiler blowdown. Conditions.

5/20/80: Tilcon Tomasso, North Branford
To discharge to Burrs Brook no more than 150 gallons per minute of wastewaters at a maximum temperature of 90°F. Conditions.

5/20/80: ESB Incorporated, Cleveland
To discharge to the Mill River at Fairfield no more than 175,000 gallons per day of wastewaters, no more than 65,000 gallons per day of treated process water, no more than 110,000 gallons per day of cooling water (maximum temperature 75°F), and no more than 3 gallons per minute of cooling water (maximum temperature 85°F). Conditions.

5/20/80: Carpenter Technology Corporation, Reading, Pennsylvania To discharge to Bridgeport Harbor no more than 414,000 gallons per day of non-contact cooling water at a maximum temperature of 110°F and no more than 1,440,000 gallons per day of non-contact cooling water at a maximum temperature of 84°F, and to Bridgeport Harbor Recirculation System no more than 1,300,000 gallons per day of noncontact cooling water and blowdown from hot mill, and to Bridgeport Harbor no more than 71 gallons per minute of blowdown from hot mill recirculation system, and no more than 2,000,000 gallons per day of non-contact cooling water at 100°F. Conditions.

5/20/80: Pfizer, Inc., Groton To discharge to the Thames River no more than 17,000,000 gallons per day of cooling water, process wastewater, stormwater runoff, and City of Groton pump station overflow, and no more than 12,000,000 gallons per day of process wastewater, and no more than 55,000,000 gallons per day of noncontact cooling water, and an average flow of 70,000,000 gallons per day of noncontact day of non-contact cooling

water and process wastewater. Conditions.

5/20/80: Roger J. Au and Son, Inc., Hartford To discharge to the Connecticut River no more than 21,600 gallons per day of dust control water and tunnel pumpage. Conditions.

5/20/80: Pfizer, Inc., New York To discharge to the Blackberry River no more than 500,000 gallons per day of discharge cooling water and quarry water. Conditions.

5/20/80: Johnson Metal Hose, Inc., Waterbury
To discharge to the Mad River no more than 4,200 gallons per day of cooling water (glazers & welders), 5,000 gallons per day of vapor degreaser, and 18,000 gallons per day of furnace cooling water. Conditions.

4/18/80: General Dynamics Corporation, Electric Boat Division, Groton To discharge boiler blowdown and treated sanitary wastewaters to Birch Plain Creek (an average daily flow of 4,450 gallons per day). Conditions.

4/18/80: Rogers Corporation, Rogers
To discharge non-contact cooling water & Industrial wastewater to the Shetucket River (an average daily flow of 1,100,500 gallons per day).
Conditions

4/18/80: Tony Calabro Sons, Inc., Waterbury
To discharge to an unnamed tributary to the Naugatuck River an average daily flow of 60,000 gallons per day of effluent from sand washing operation. Conditions.

4/18/80: Torin Corporation,
Torrington
To discharge to the West Branch
Naugatuck River an average
daily flow of 198,300 gallons
per day of wastewaters and
cooling water. Conditions.

4/18/80: Atlantic Wire Company, Branford
To discharge to the Branford
River an average daily flow of
460,800 gallons per day of
wastewaters. Conditions.

5/14/80: Solvents Recovery Service of New England, Inc., Southington To discharge to the Quinnipiac River a maximum daily flow of 5,000 gallons per day of wastewaters. Conditions.

4/18/80: LaPointe Industries, Inc., Rockville To discharge to the Hockanum River an average flow of 50 gallons per minute of wastewaters. Conditions.

5/26/80: National Can Corporation, Danbury
To discharge to Sympaug Brook no more than 102,200 gallons per day of cooling water and 144,000 gallons per day of process water.
Conditions.

5/20/80: AVCO, Lycoming Division and Stratford Army Engine Plant, Stratford
To discharge to the Housatonic River intermittent storm water overflows, oil & grease treatment

plant effluent, and metal finishing wastewater treatment plant effluent. Conditions.

5/20/80: The Anaconda Company, Brass Division, Waterbury To discharge to the Naugatuck River non-contact cooling water, oil separator; and other wastewaters. Conditions.

5/20/80: New Haven Water Company, New Haven

To discharge to the Mill River no more than 10,000 gallons per day of filtered river water. Conditions.

5/20/80: West Hartford Realty and/or United Tool and Die, West Hartford To discharge to Paper Brook no more than 22,000 gallons per day of treated metal finishing wastewaters. Conditions.

6/12/80: Independent Oil Company of Connecticut, Stamford
To discharge to Long Island Sound—Stanford Harbor intermittent storm water from a petroleum marketing terminal operation. Conditions.

6/12/80: Connecticut Water Company, Clinton
To discharge to the Scantic River no more than 79,000 gallons per day of settled filter backwash water. Conditions.

6/12/80: Mobil Oil Corporation, Scarsdale To discharge to Long Island Sound-New Haven Harbor intermittent storm water from a petroleum marketing terminal operation. Conditions.

6/12/80: Dosch - King Company, Inc., New Haven To discharge to Long Island Sound-New Haven Harbor intermittent storm water from a petroleum marketing terminal operation. Conditions.

6/12/80: Gulf Oil Company - U.S., New Haven
To discharge to Long Island Sound-New Haven Harbor intermittent
storm water from a petroleum marketing terminal operation. Conditions.

6/12/80: Sun Oil Company of Pennsylvania, Philadelphia To discharge to Long Island Sound-Bridgeport Harbor via Johnson's Creek intermittent storm water from a petroleum marketing terminal operation. Conditions.

6/12/80: Hampden Oil Corporation, Glastonbury
To discharge to the Connecticut
River intermittent storm water
from a petroleum marketing terminal operation. Conditions.

6/12/80: Amerada Hess Corporation, Woodbridge
To discharge to the Thames River intermittent storm water from a petroleum marketing terminal operation. Conditions.

6/12/80: Springborn Laboratories, Inc., Enfield To discharge to the Scantic River no more than 30,000 gallons per day of cooling water and 200 gallons per day of boiler blowdown. Conditions.

6/12/80: Continental Forest Industries, Portland To discharge to the Connecticut River no more than 21,500 gallons per day of cooling water. Conditions.

6/12/80: USM Corporation, Shelton To discharge to the Housatonic River no more than 25,000 gallons per day of cooling water & boiler blowdown and 150,000 gallons per day of treated metal finishing wastewaters. Conditions. 6/12/80: Eaton Corporation, New Haven To discharge to New Haven Harbor no more than 3,000 gallons per day of metal finishing wastewaters. Conditions.

6/30/80: Torin Corporation, Still River Plant, Torrington To discharge to the Still River no more than 145,000 gallons per day of non-contact cooling water. Conditions.

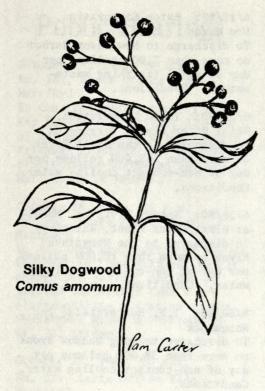
6/30/80: Sperry Division, Wheeler Electronics Plant, Waterbury To discharge to the Naugatuck River no more than 12,000 gallons per day of non-contact cooling water. Conditions.

6/30/80: T.F. Butterfield, Inc., Naugatuck To discharge to Long Meadow Brook no more than 38,000 gallons per day of non-contact cooling water. Conditions.

6/30/80: Colchester Water Department, Colchester
To discharge to Cabin Brook no more than 72,000 gallons per day of contaminated groundwater.
Conditions.

6/30/80: City of Putnam Water Department
To discharge to the Little River no more than 380,000 gallons average flow, four times per year, of settling basin drainage, and 36,000 gallons per day of filter backwash, and 140,000 gallons, once every seven years, of clear well drainage. Conditions.

6/30/80: Chase Brass and Copper Company, Cleveland To discharge to the Naugatuck River no more than 12,020 gallons per day of combined vacuum filtrate and sludge decant filtrate effluent from settling tank and Zircalloy treatment discharge. Conditions. 6/30/80: Gould, Inc., Distribution and Controls Division, Plantsville To discharge to an unnamed tributary to the Quinnipiac River no more than 22,500 gallons per day of wastewaters. Conditions. 6/30/80: Bristol Industries Corporation, Bristol To discharge to the Pequabuck River an average daily flow of 429,900 gallons per day of wastewaters. Conditions.



Trailside Botanizing

by G. Winston Carter

The autumn foliage with its spectacular display of color includes the dogwoods with their characteristic reddish-purple leaves. Most people associate dogwood with the showy array of spring flowering shrubs, but in this area only the flowering dogwood have showy flowers, which are actually colored bracts. Most of the nearly fifty types of dogwood in the world are shrublike and have less conspicuous flattop flower clusters.

The flowering dogwood sometimes grows in the woods as a small tree and in this stage is recognizable at any time of the year by its alligator-like bark. The silky dogwood, on the other hand, grows

more in the open along the edges of fields. It may also serve a role as one of several pioneer shrubs that take over a field which is moving toward becoming a forest once more.

In June or July, the silky dogwood will have a great many white flat-top flower clusters, and later on it will have many light blue berries. By October the species may be harder to recognize without its berries. At this time of year, silky dogwood can be confused with Red Osier dogwood. Both have reddish branches; however, the pith of he Red Osier is white compared to the brown pith of the silky dogwood.

The fruits and browse of dogwood are valuable food for wildlife. At one time its very hard wood was used for making wooden daggers. Its original name was dagwood rather than dogwood because of this use.

DEP Citizens' Bulletin

State of Connecticut Department of Environmental Protection State Office Building Hartford, Connecticut 06115 SECOND CLASS POSTAGE PAID AT HARTFORD, CONNECTICUT